

Brief Report on the celebration of WMO Day – 2017 on 23rd March 2017

@ Bangalore University, Bangalore
by Indian Meteorological Society – Bangalore Chapter

1. Background

Based on suggestion by the Indian Meteorological Society (IMS) Headquarters the Bangalore Chapter had celebrated a WMO Day – 2017 on 23rd March 2017 with a theme *Understanding clouds*. This Chapter is actively involved in celebration of several events from last few years. As per the guidelines of IMS, we tried to gather students of 9-12th class for the event. However, the entire state is having examinations for the student of this category and unable to reach them during March through May, of any of the year. However, students from graduate and post-graduate courses of Bangalore University benefitted by this event.

2. Participation

The Program was conducted in the Auditorium of Department of Geography and Geoinformatics, Bangalore University, Bangalore on 23rd March 2017. There were 300-students participated in the written test as QUIZ programme on 22 March 2017, and were from different graduate and post graduate courses from several colleges/institutions in and around Bangalore, including the various Departments from Bangalore University. The faculty and members of IMS-B also participated in good numbers. There were 100-participants for the inaugural session. An effort is made to show the GPS radiosonde balloon launch from Department of Physics on the evening of WMO Day 2017, where 200 students/staff members witnessed the launch as promotional activity of meteorological observations, particularly upper air observations.

3. Technical Programme:

The programme consisted of following:

- Registration
- Written test for the Participants on 22 – March – 2017
- Evaluation and Selection of Teams for PRIZES
- Display of Posters
- Address by Eminent Scientists, Dr SC Chakravarty, Dr Manikiam, Dr Kusuma G Rao
- Address by the Chairman, Department of Geography and Geoinformatics
- Distribution of Prizes to winners
- Vote of Thanks by the Secretary, IMS-B
- Witnessing the launch of GPS RS from Department of Physics by 05:30pm

The screening test was comprised of 50-multiple choice questions covering various aspects of Earth and its atmosphere, green house effect, causes and effects of ozone hole, global warming and its effects, understanding clouds, physics and dynamics of clouds, nature of clouds. Three students were shortlisted on the merit and cash prizes of Rs. 1000, 700 and 500 were given. Also had best posters and two of them received a cash prize of Rs. 500 each. The programme invitation was sent to about 40-departments in the University and 10-institutions in Bangalore covering various departments of PG studies in physics, chemistry, mathematics, computer science, communication, electronic sciences, statistics, geography, geology, biological science, life science, biotechnology, microbiology, environmental science, psychology, sericulture, botany, zoology, and so-on.

4. Conduct of the Event: The event was started by a welcome from the Secretary-IMSB, by mentioning the role of IMS, IMSB and the importance of celebration of WMO Day in the University. Then, Dr Nagaiah, Professor and Chairman of Physics mentioned about the importance of atmosphere, meteorology and role of clouds. Dr Ashok Hanjagi, Chairman Department of Geography and Geoinformatics gave welcome address. The written test was conducted for 300-student on previous day at several departments in university campus. During inaugural session, Dr Chakravarty highlighted the essence of celebration of WMO Day and suggested several ways of protection of Earth by human beings. Highlighted on the role of clouds in energy budget, monsoonal effect, precipitation, changes due to pollution, the task of meteorologist in incorporating all these in to model in forecasting weather and climate. Finally the programme was concluded by the Secretary by acknowledging the support of Indian Meteorological Society, Indian Meteorological Society-Bangalore Chapter, Bangalore University, various institutions participated, members of IMS-B and others who have helped in all respects in successful completion of the event.

5. Winners of the programme

The prize winners of QUIZ programme, on the order of merit

- I Prize – Chinmayi Hegde
- II Prize – Sunita Lalruatkmi
- III Prize – Pushpa

In the POSTER, the following members won the Prizes as BEST poster presentation:

- Susheel Kumar G and Anilakumari BH, both cash prize of Rs. 500 each

Expenditure incurred

A total of Rs. 15,000 (rupees fifteen thousand only) has been incurred for the conduction of the celebration of the WMO Day - 2017. All the expenses were borne by the Secretary and the details are mentioned in the attachment. Later money was drawn vide cheque no. 114532 dated 25-04-2017 towards the expenses for WMO Day celebration

Abstract of the expenses towards Celebration of WMO Day – 2017 on 23rd March 2017

No	Particulars	Cost
1	Printing of question paper for written test for 300-participants, M/s Sainath Xerox, #107/7, Malleswaram, Bangalore – 560003	1,500
2	Cash prize for the winners (Rs. 1000, 700 and 500 for I, II and III-prize)	2,200
3	Best poster presentation award for two persons, Rs. 500 each	1,000
4	Refreshment include sweet, kara, peda, sweet, salt biscuits and tea for 100-members during inaugural session on the morning of the Day, Sri Annapoorneswari Upahara Kendra, Bangalore University, Bengaluru - 56	5,000
5	Biscuits/tea and water cups/can for 200-members during witnessing of launch of GPS Radiosonde balloon ascents by 0530 pm on evening of celebration of WMO Day at Department of Physics, Shiva Kumar Hotel, JB Road, Mariyappanapalya, Bengaluru - 56	3,600
6	Gift packs of sweets for invitees, Reliance fresh, Ullal Main Rd, Bangalore	797.40
7	Gift pens-5 nos, Sri Vinayaka Enterprises, Jnanabharathi, Bengaluru - 56	265
8	Pickup and drop of speaker, Satyam travels, 1587, I Main, Chandra layout, Vijayanagar, Bengaluru - 40	638
	Total	15,000

(Total of rupees fifteen thousand only)

Feedback of Participants: Several participants expressed their satisfaction on the conduct of the event and requested IMS-B to have more number of events in future and requested to host more events at their institutions also. The programme was useful to the students to get better understanding in understanding clouds. Executive Members of the IMS-B wishes to convey the grateful thanks to the IMS-Hqs for the support and encouragement.

A grant of Rs. 15,000 (rupees fifteen thousand only) has been utilized for the purpose of its sanction. IMS has released a sum of Rs. 30,000 and the remaining money will be utilized for the developmental activity of IMS-Bangalore chapter in this financial year or will be credited to IMS-Hq account after hearing from your office in this regard.

(Dr Kamsali Nagaraja)
Secretary – IMS B

INDIAN METEOROLOGICAL SOCIETY
Bangalore Chapter

in association with
Department of Geography & Geoinformatics and
Department of Physics
Bangalore University, Bengaluru

Celebrates

*World Meteorological Day with a theme **Understanding Clouds***

All are cordially invited

Keynote address

Prof Shivakumara I S

Dean, Faculty of Science, Bangalore University

Special lecture

Understanding clouds through Satellites

Dr B Manikiam, Former Professor, Sir MV-ISRO Chair

ON Thursday 23rd March 2017 at 10am

Venue: Department of Geography & Geoinformatics

Visit by 4 pm to ASSR Lab of Department of Physics
MET Aware Programme: AWS, MBLM and Radiosonde Balloon facilities

Prof Ashok D Hanjagi

Chairman,

Department of Geography
Bangalore University

Prof N Nagaiah

Chairman,

Department of Physics
Bangalore University

Dr Kansali Nagaraja

Secretary

IMS-Bangalore Chapter
Bangalore

Indian Meteorological Society – Bangalore Chapter

Celebration of WMO Day – 2017
on the theme **Understanding Clouds**
23rd March 2017

Awareness of TEST

Name of the Candidate :
Course studying /semester :
Institution :
Email and Contact number :

Instructions: Answer all the questions, each questions carries 2- marks. Tick only one answer that is very much of relevance to the question. No negative marks.

1.	Where is the Earth located in the Solar System?			
	a)	It's the second planet from the Sun	b)	It's the third planet from the Sun
	c)	It's the fourth planet from the Sun	d)	It's the fifth planet from the Sun
2.	How old is the Earth?			
	a)	5 million years	b)	4.543 million years
	c)	4.543 billion years	d)	5.5 billion years
3.	Which is the largest ocean on our planet?			
	a)	The Pacific Ocean	b)	The Atlantic Ocean
	c)	The Indian Ocean	d)	The Arctic Ocean
4.	Types of clouds does not includes			
	a)	Stratus Clouds	b)	Cirrus Clouds
	c)	Stevenson Clouds	d)	Cumulus Clouds
5.	Which of the following is a cloud in the ground?			
	a)	Wall cloud	b)	Funnel cloud
	c)	Fog	d)	Shelf cloud
6.	Elevation of Bangalore University from sea level is			
	a)	100 m	b)	500 m
	c)	550 m	d)	900 m
7.	Rotations of cyclone over Bay of Bengal is			
	a)	Clock wise	b)	Counter-clock wise
	c)	Not rotating	d)	Random direction
8.	High clouds that are composed of ice crystals are			
	a)	Cumulus clouds	b)	Alto cumulus clouds
	c)	Nimbostratus clouds	d)	Cirrus Clouds
9.	Alto in clouds means			
	a)	Upper	b)	Lower
	c)	Middle	d)	Surface
10.	Bengaluru gets most of rainfall during			
	a)	Northeast monsoon	b)	Southwest monsoon
	c)	South monsoon	d)	North monsoon
11.	The two ingredients needed to form clouds aloft are			
	a)	Instability and lifting	b)	Lifting and saturation
	c)	Wind shear and lifting	d)	Instability and air with high dew point

12.	Clouds appear white because of			
	a)	Raman scattering of sun light	b)	Rayleigh scattering of sun light
	c)	Back scattering of sun light	d)	Tyndall scattering of sun light
13.	A ring around the moon is due to the shining of			
	a)	Nimbostratus clouds	b)	Altostratus clouds
	c)	Cirrostratus clouds	d)	Fair weather cumulus
14.	The atmosphere around the earth is warmed because			
	a)	Warm air cannot escape	b)	Radiation is absorbed and retained
	c)	Fossil fuels release heat	d)	Plants release carbon dioxide
15.	Fog formed by cooling of the earth's surface at night is			
	a)	Radiation fog	b)	Steam fog
	c)	Advection fog	d)	Frontal fog
16.	Which cloud will produce heavy rain?			
	a)	Cumulus	b)	Altostratus
	c)	Cumulonimbus	d)	Cirrus
17.	IMS stands for			
	a)	Indian Meteorological Society	b)	India Meteorological Society
	c)	Indian Metrological Society	d)	Indian Monsoon Society
18.	Anvil of cloud is due to			
	a)	Tropopause	b)	Stratopause
	c)	Mesopause	d)	Thermopause
19.	Volcanic eruptions generally result in			
	a)	Cooling of the atmosphere	b)	Gradual Warming of the atmosphere
	c)	Rapid Warming of the atmosphere	d)	Results neither in cooling nor warming of the atmosphere
20.	CCN refers to			
	a)	Complex clouds nuclei	b)	Cloud Condensation Nuclei
	c)	Cloud Computing Network	d)	Continuous Clouds in Northern hemisphere
21.	Increased cloud cover leads to _____ of the atmosphere			
	a)	Warmer	b)	Cooler
	c)	Does not change	d)	Random behaviour
22.	As water warms, it			
	a)	Increases in density	b)	Sinks
	c)	expands	d)	Is irreversible altered
23.	The eye of cyclone has			
	a)	Low pressure	b)	High pressure
	c)	Heavy rains	d)	All the above
24.	WMO stands for			
	a)	World Meteorological Organisation	b)	World Metrological Organisation
	c)	World Monsoon Organisation	d)	World Measurement Organisation

25.	Size of the aerosol particle is			
	a)	order of atomic dimension	b)	order of molecular dimension
	c)	larger than the molecules	d)	Much smaller than the molecules
26.	Tropopause layer over Bengaluru exist roughly at			
	a)	1 km	b)	5 km
	c)	16 km	d)	100 m
27.	The layer of the atmosphere in which weather change occurs is the			
	a)	Troposphere	b)	Stratosphere
	c)	Mesosphere	d)	Exosphere
28.	What type of radiation is trapped by clouds?			
	a)	UV rays	b)	X-rays
	c)	γ -rays	d)	IR-rays
29.	Vertical movement of air due to uneven heating is called			
	a)	convection	b)	reflection
	c)	conduction	d)	advection
30.	In the Northern Hemisphere, the direction of the flow of the jet stream is towards the			
	a)	east	b)	west
	c)	north	d)	south
31.	The average temperature of Earth without atmosphere is			
	a)	- 30 C	b)	- 18 C
	c)	- 8 C	d)	+ 27 C
32.	Clouds consists of			
	a)	Water droplets	b)	Ice crystals
	c)	Water droplets at low altitudes and ice crystals at high altitudes	d)	Water droplets at high altitudes and ice crystals at low altitudes
33.	Clouds occur when moist air is cooled by			
	a)	Expansion when it rises	b)	Expansion when it falls
	c)	compression when it rises	d)	compression when it falls
34.	The exceptionally strong warming of the eastern Pacific is referred to as			
	a)	the Coriolis effect	b)	La Niña
	c)	El Niño	d)	Eastern Pacific Shallow Water Warming
35.	Clouds are moving because of			
	a)	Wind	b)	Temperature gradient
	c)	Pressure gradient	d)	All the above
36.	Clouds are formed in earth's atmosphere by			
	a)	An decrease in temperature of water vapour	b)	An increase in temperature of water vapour
	c)	An decrease in number of water droplets	d)	An increase in number of water droplets
37.	Cloud most commonly from into thunderstorms is			
	a)	Stratus	b)	Cumulus
	c)	Altostratus	d)	Cirrus
38.	Lightning is due to			
	a)	Collision of clouds	b)	Exchange of light
	c)	Exchange of water vapour	d)	Exchange of charges

39.	Lightning is between			
	a)	Cloud to cloud	b)	Within clouds
	c)	Cloud to ground	d)	All the above
40.	Which is the main cause for the prevention of clouds from precipitation?			
	a)	Air temperature	b)	Cloud height
	c)	Latitude	d)	Quantity available
41.	Gamma and X-rays are not used for remote sensing because			
	a)	They are absorbed by object	b)	They are reflected by object
	c)	They are absorbed by layer atmosphere	d)	They are not absorbed
42.	Geo-stationary satellites			
	a)	Rotate very fast	b)	Are located near the earth
	c)	Are stationary	d)	Rotate with speed equal to that of earth
43.	If you keep a cold water bottle from freezer outside, the water droplets are formed on the outer surface are due to			
	a)	Moisture in the air	b)	Diffusion of water
	c)	Clouds formed when it is brought outside	d)	Outer layer contains water
44.	Clouds			
	a)	Absorb energy coming from sun	b)	Reflect energy coming from sun
	c)	Scatter energy coming from sun	d)	All the above
45.	INSAT system is type of			
	a)	Satellite	b)	Orbital satellite
	c)	Sun-synchronous satellite	d)	Geo-stationary satellite
46.	Southwest Monsoon refers to			
	a)	January - March	b)	April – May
	c)	June – September	d)	October - December
47.	Minimum temperature over Bengaluru occurs at			
	a)	During sunrise	b)	Immediate after sunrise
	c)	Before sunrise	d)	Midnight
48.	Average distance between Sun and Earth			
	a)	150,000 km	b)	15,00,000 km
	c)	150,000,000 km	d)	150,000,000,000 km
49.	Day and night on earth is due to			
	a)	Rotation	b)	Revolution
	c)	Evolution	d)	Tilt of earth
50.	During equinox, the length of the day and night are			
	a)	equal	b)	day is more compared to night
	c)	day is less compared to night	d)	No relation

Some of the photographs of event





